PIN80

COST-EFFECTIVENESS ANALYSIS OF STRIBILD COMPARED TO SIMILAR ANTIRETROVIRAL THERAPIES IN A SPECIALTY RETAIL PHARMACY

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OBJECTIVES: Approximately 1.1 million people in the U.S. are living with HIV, with 50,000 new infections per year. The FDA approved Stribild™, a once-daily HIV medication, in September of 2012. The primary objective of this study was to assess the cost and disease-related outcomes of Stribild versus guideline-recommended treatment options for HIV patients in a specialty retail pharmacy. A secondary objective was to assess compliance via Medication Possession Ratios (MPRs). **METHODS:** HIV patients who were prescribed one of five antiretroviral regimens in the period from January 1, 2010 to June 21, 2013 and who obtained their medications through Schnucks Specialty Pharmacy were selected via a retrospective chart review. By measuring the direct cost of the medications to the pharmacy and the disease-related outcomes, change in CD4 count and viral load suppression, the cost-effectiveness of Stribild versus its comparators was assessed. **RESULTS:** A total of 92 patients were included in this study: 50 Stribild patients and 42 patients on alternate regimens: 15 Atripla®; 6 Isentress®; 10 Prezista®; and 11 Reyataz®. Incremental Cost-Effectiveness Ratios (ICERs) were conducted between Stribild and the comparators for change in mean CD4 count and percent viral load suppression (<20 copies/ml) achieved. In terms of CD4 count, Stribild was most cost-effective when compared to Prezista and least cost-effective when compared to Isentress. Analyses of viral load suppression indicated that Stribild is more cost-effective than Prezista and Reyataz but less cost-effective than Atripla or Isentress. Mean MPR was greater than 95% for Stribild and three of its comparators (not including Atripla); however, 78 percent of Stribild patients achieved MPR ≥ 95% which demonstrates higher compliance than all comparators except the Isentress patients. **CONCLUSIONS:** The once-daily regimen Stribild appears effective at treating the HIV virus while maintaining compliance for most of its patients; its high cost remains a concern for formulary decision makers.

PIN81

COST-EFFECTIVENESS OF ANTIMICROBIALS AS TREATMENT FOR PATIENTS WITH COMPLICATED SKIN AND SOFT TISSUES INFECTIONS: A COMPARISON BETWEEN CEFTAROLINE, LINEZOLID AND VANCOMYCIN IN THE RUSSIAN HEALTH CARE

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OBJECTIVES: To estimate the cost-effectiveness of antimicrobials (ceftaroline, linezolid and vancomycin) as treatment for patients with complicated skin and soft tissues infections. **METHODS:** A literature-based cost-effectiveness analysis was developed to estimate the costs of complicated skin and soft tissues infections patients initiating therapy with ceftaroline, linezolid or vancomycin. Direct expenses associated with complicated skin and soft tissues infections and resulting follow-up costs were calculated using general tariff agreement of Russian obligatory insurance system and official national statistics. For reference, accepted exchange rate was 1 EUR = 40 RUB. **RESULTS:** Compared to ceftaroline, linezolid or vancomycin results in increases in drug therapy costs: 77 997 RUB (1 950 EUR) per patient in ceftaroline group (therapy duration – 9 days), 78 816 RUB (1 970 EUR) per patient in vancomycin group (therapy duration – 10 days) and 117 893 RUB (2 947 EUR) per patient in linezolid group (therapy duration – 12 days). The values of cost/clinical cure rate are estimated at 96 055 RUB (2 401 EUR) in ceftaroline group, 98 030 RUB (2 451 EUR) in vancomycin group, and 138 860 RUB (3 472 EUR) in linezolid group per patient. **CONCLUSIONS:** The results of cost-effectiveness illustrate that ceftaroline is dominant in Russian patients with complicated skin and soft tissues infections who are initiating antimicrobials therapy compared with linezolid or vancomycin.

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ANTIBACTERIAL TREATMENT OF METICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS COMPLICATED SKIN AND SOFT TISSUE INFECTIONS: A COST-EFFECTIVENESS ANALYSIS IN GREECE

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OBJECTIVES: Meticillin-resistant staphylococcus aureus (MRSA) is an important cause of antimicrobial-resistant health care-associated infections worldwide. Its prevalence remains high in the Greek hospital setting. Complicated skin and soft tissue infections (cSSTIs) due to MRSA are associated with prolonged hospitalization, additional costs of care and significant morbidity. The purpose of this study was to conduct a cost-effectiveness analysis of different treatment scenarios in the management of MRSA-cSSTIs, under a third-party payer perspective. **METHODS:** The model was based on a decision tree simulating costs and outcomes for a maximum of 28 days, consisting of empiric, first-line and second-line treatment, for patients with MRSA-cSSTIs. Inpatient and outpatient health care services were included in the analysis. Data on efficacy of the pharmacotherapies under evaluation were derived from a recent meta-analysis (Bassetti et al 2013) and resource use was elicited via an expert panel. Economic results, expressed in Euros (2013), reflect the Greek social insurance setting. **RESULTS:** Three different first→second line treatment scenarios (daptomycin→linezolid, linezolid→daptomycin, vancomycin→linezolid) were evaluated, as recommended by the expert panel. Total management costs per patient were €4,199, €3,809, and €3,900; quality adjusted life years (QALY) gained were 0.058, 0.059 and 0.057 respectively for the above scenarios. The scenario containing first-line linezolid proved to be a dominant therapeutic option vs. the other scenarios (less costly, higher QALYs), whereas first-line daptomycin scenario did not appear to be cost-effective vs. the respective vancomycin scenario (incremental cost-utility ratio €243,932) in the management of MRSA-cSSTIs. Second line oral linezolid was used as continuation treatment after failure/intolerance or switch from intravenous vancomycin and daptomycin. Second line intravenous daptomycin was assumed to be administered via an outpatient parenteral treatment service. **CONCLUSIONS:** Findings suggest that use of first-line linezolid in the management of MRSA-cSSTIs could result in savings for the third-party payer in Greece accompanied by enhanced quality of life results.

PIN83

MATHEMATICAL MODELS OF HEPATITIS B VACCINATION AND SCREENING PROGRAMMES IN THE UNITED KINGDOM: A SYSTEMATIC REVIEW

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OBJECTIVES: The United Kingdom (UK) has a targeted hepatitis B (HBV) vaccination programme for at-risk patient groups; however such a programme can be challenging to implement. The World Health Organisation (WHO) recommends universal HBV vaccination and this approach has been adopted by most developed countries. A systematic review was conducted to identify UK-based mathematical models for HBV to determine whether current evidence supports the use of a universal vaccination programme versus a targeted approach. **METHODS:** Embase, Medline, Econlit and The Cochrane Library were searched for studies reporting HBV mathematical models (economic or epidemiological) in the UK population. Hand searching of Health Protection Agency and National Institute for Health and Clinical Excellence guidance documents was also performed. Economic models (cost-effectiveness, cost-utility, cost-benefit, cost-consequence) were included if they assessed HBV vaccination or screening programmes. Epidemiological studies were included if they modelled HBV immunity and infection rates. Data were independently extracted and summarised into evidence tables by two reviewers and quality appraisal of included studies was performed. **RESULTS:** Electronic database searches identified a total of 649 citations resulting in 11 relevant publications. Hand searching yielded an additional two publications; a total of 13 included publications representing seven economic evaluations and six epidemiological modelling studies. Overall, there was considerable variation in model methodologies including methods of discounting used, static versus dynamic approaches and sources of model inputs. Only one epidemiological modelling study considered HBV transmission patterns across the UK. **CONCLUSIONS:** Current HBV vaccination policy in the UK is dependent on the demonstration of cost-effectiveness. However, this review highlights some of the limitations inherent in the models which have been used to support policy decisions. Alternative modelling approaches, as well as new data on key inputs, are desirable if the full value of a universal HBV vaccination programme in the UK is to be assessed.

PIN84

COST-EFFECTIVENESS OF ROUTINE INFANT VACCINATION STRATEGIES IN RUSSIA: AN ECONOMIC EVALUATION

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OBJECTIVES: Today vaccination for children from 0 to 20 months in the Russian Federation is carried mainly by DPT and monovalent vaccines. As a result, a child of this age receives 12 injections. Vaccination against Hib infection so far is only available for children at risk (approx. 20%). Introdution of DTaP-IPV-Hib combined vaccine could reduce the number of injections received by the child and increase the coverage against Hib infection from 20% to 97%. The objective of the present study is to assess the economic evaluation of DTaP-IPV-Hib vaccine introduction into immunization schedule and select the most cost-effective vaccination scheme against Hib infection. **METHODS:** A cost-effectiveness analysis of the DTaP-IPV-Hib vaccine is performed on suggested Markov model. The four vaccination schemes are intercompared : the current immunization program (Scheme0), a 3+1 immunization DTaP-IPV-Hib vaccine (Scheme P), a mixed DTwP /DTaP-IPV-Hib immunization (Scheme mix) and a potential scenario - the current scheme, but with expanded (97%) Hib coverage - Scheme 1. The cohort of infants born in 2011 year is followed over their lifetime. Direct and indirect medical costs are measured from the perspective of the public payer. Outcomes are measured in life years gained (LYG).Exchange rate is 1€ = 41 rub. **RESULTS:** According to the model, total costs of immunization Scheme are: 0 – 4216723519 rub. (102 846 915€), Scheme 1 –4924823829 rub.(120 117 654€), Scheme P -6035132925rub.(147 198 364€), Scheme mix - 4 921 824 835 rub (120 044 508€). The values of cost/LYG are estimated at 4243 198 rub .(103493€) for Scheme 0, 1 224 270rub.(29860€)for Scheme 1, 1500 283 rub. (36592€) for Scheme P, 1223 525rub.(29842€)– for Scheme mix. **CONCLUSIONS:** The introduction of DTaP-IPV-Hib combined vaccine would bring improvement into the Russian immunization program through a Scheme mix.

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DIFFERENT DISCOUNTING APPROACHES AND THEIR IMPACT IN ECONOMIC EVALUATION: A PRACTICAL EXAMPLE USING HEPATITIS B VACCINATION

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OBJECTIVES: To evaluate the impact of different discounting approaches on economic evaluation using an example of Hepatitis B model. Currently, constant discounting rates of 3.5% are applied for costs and outcomes in the UK. This study applied different approaches such as empirical, stepwise and time-shifted discounting in parallel to the constant discounting to identify their respective impact on the cost-effectiveness results with respect to the NICE threshold. **METHODS:** To compare costs and outcomes of a vaccination policy, a Markov model was built for the UK population birth cohort. Patients entered after contracting Hepatitis B and were followed until 80 years old. The health states included chronic carrier phase, immune, compensated and decompensated cirrhosis, hepatocellular carcinoma and death. The different discounting approaches were applied to the costs and health outcomes. The Incremental Cost-Effectiveness Ratios (ICERs) thus obtained were compared. **RESULTS:** The ICER obtained was higher than the NICE threshold of £20,000 to £30,000 per QALY gained